Motivation-based IS Evaluation Strategy: A Perspective of Marketing Information Systems

Hafizul Islam
Shah Jahan Miah
Faculty of Business and Law
Victoria University, Footscray Park Campus
Victoria, Australia
Email: hafizul.islam@vu.edu.au; shah.miah@vu.edu.au

Abstract

The article describes the importance of motivational factors through an analysis of the core TAM constructs in the context of marketing IS evaluation. We argue that our findings compliment current IS evaluation strategy, specially for measuring motivational elements for online IS. The study consequently provides an empirical validation of the importance of motivational and behavioural factors. Through an experimental analysis we evaluated the relative importance of perceived enjoyment with perceived usefulness of using an online website for shopping purposes and found that enjoyment was by far the dominant predictor of attitude towards online shopping. The result illustrates that in terms of IS evaluation online environments have moved from being functional online applications to being functional, engaging and interactive online IS (e.g. websites).

Keywords: Consumers' technology acceptance; User behavioural factors; Systems evaluation; TAM

INTRODUCTION

IS research community has a long history of making evaluation strategy broader for measuring expected value and effectiveness for businesses. Researchers ideally grapple with two main theoretical areas such as technology acceptance model (Davis, 1989; Straub and Burton-Jones, 2007; Venkatesh, Morris, Davis, and Davis, 2003) and IS success measuring framework (DeLone and McLean, 1992, 2003). The TAM model is based on the understanding of the usage concept in IS development (Lee, Kozar, and Larsen, 2003; Malhotra, Galletta, and Kirsch, 2008). On the other hand IS success framework by Delone and McLean (1992, 2003) mainly focus on factors that effect IS success. In advancing TAM implications the main aim of this study is to explore motivational factors for online IS applications through the relative analysis of the core TAM constructs, in the context of marketing IS development.

TAM research also has integrated motivational constructs from the very beginning (Davis, Bagozzi, and Warshaw, 1992; Howard, Marshall, and Swatman, 2010). Davis et al.'s (1992, p. 1112) definitions of intrinsic and extrinsic motivation are as follows;
"intrinsic motivation refers to the performance of an activity for no apparent reinforcement other than the process of performing the activity per se....extrinsic motivation refers to the performance of an activity because it is perceived to be instrumental in achieving valued outcomes that are distinct from the activity itself..."

This direction has not been substantially advanced in improving IS evaluation strategy. This study attempts to further expand the concept of motivation in the context of marketing information systems development. User behavioural and attitudinal factors have been long recognized as being important since TAM model was introduced. In IS development studies, many studies suggest that users' intention, motivation and behaviour matters should be reflected in system solution (Howard et al., 2010). With this background we also acknowledge the work in the Technology Acceptance Model (TAM), TAM2 and the Unified theory of acceptance and use of technology (UTAUT) (e.g. (Davis, 1989; Davis et al., 1992; Straub and Burton-Jones, 2007; Venkatesh et al., 2003). However in terms of developing and evaluating Marketing IS in the context of the online environment, understanding user behavioural factors such as motivation, perception, feelings, expectations and emotions are paramount. Venkatesh et al. (2003) also suggest that the strength of behavioural expectation can mainly be seen through its ability to capture inside details and account for associative uncertainty in the prediction of behaviour. This implies that the utility of current orientation of TAM or TAM 2

can be improved to integrate and evaluate behavioural and motivational factors in better way to better understand consumers' technology acceptance.

In the domain of IS evaluation research, many previous studies have analysed the use of TAM and TAM2 by enhancing various constructs to assess the adoption and value of IS applications. Studies (Lilienthal, Messerschmidt and Skiera, 2010; Howard, Marshall and Swatman, 2010) pointed about the common characteristics of TAM oriented IS research.

1. Assigning TAM to new technology domains which has not yet been measured,

2. Integrating new constructs to enhance the explained variance in measuring adoption intention across various platforms and environments, and

3. Discussing the re-conceptualization of TAM constructs across various platforms and environments.

Main stream IS research needs to address relevant research findings of other disciplinary areas in order to compliment with useful extensions of knowledge. It is also argued that TAM oriented research needs to have more fresh thinking to enhance its value and relevance to the current emerging application design and usage (Benbasat and Barki, 2007). The conceptual work by Howard et al. (2010) simplifies and trivialises the concept of motivation in the context of participative management and organisational intervention to adopt and use new IS. Their study does not shed any light in understanding user motivation to adopt and use an IS application in an online context.

In marketing IS research the typical assumption states that when consumers accept and use online websites, they accept and use online technologies and innovations. As such, various interactive and Internet technologies have transformed the website to an electronic environment, in other words an effective and engaging online IS application (Heijden, Verhagen, and Creemers, 2003; Wang, 2008). Traditionally, TAM framework has limited value for evaluating such online IS applications, because the value of online IS depends on the influence of motivational and behavioural constructs that attracts and engages the online consumer. Such motivational and behavioural constructs have not been adequately evaluated with TAM in the online IS context.

Studies using TAM to predict broad Web/Internet usage contexts, online purchasing behaviour, virtual store acceptance etc. (Childers, Carr, Peck, and Carson, 2001; Heijden et al., 2003; Moon and Kim, 2001); (Chen and Tan, 2004; Lee, Fiore, and Kim, 2006; O'Cass and Fenech, 2003) have been conducted in the past few years, and these studies by and large confirm the relevance and appropriateness of Perceived Usefulness (PU), Perceived Ease of Use (PEOU) in an online context, and find substantial evidence for the effects of intrinsic enjoyment i.e, perceived enjoyment (PE) on consumers surfing the Web (Heijden et al., 2003; Moon and Kim, 2001; Teo, Lim, and Lai, 1999). Based on prior research findings and importance of the PE construct influencing attitude and intention, the TAM framework used in this study has been extended to include the PE construct. The TAM framework has been reconceptualised through our online experiment to analyse the relative importance of the major TAM constructs and the resulting outcome of the importance of motivational factors influencing online shopping usage and acceptance.

The paper is organized as follows. The subsequent section describes theoretical background and hypothesis. The following section then introduces the research design we have adopted and the outcomes. The section after that includes data analysis and findings followed by discussion.

RESEARCH BACKGROUND AND HYPOTHESIS
Researchers have been continually seeking richer understanding of consumer attitudes and behaviour over the last couple of decades. Clearly many motivations exist as shopping goals, but most typologies consider utilitarian (goal oriented) and hedonic (experiential) motivations as fundamental to understanding consumer shopping behaviour because they maintain a basic underlying presence across consumption phenomena (Babin, Darden, and Griffin, 1994; Childers et al., 2001). As more consumers turn to online shopping retailers increasingly strive providing a stimulated online shopping experience using cutting-edge interactive utilities and features through their respective websites.

Interactivity of a website is not only seen as offering utilitarian benefits due to saving time/effort, reducing risk, and increasing likelihood of finding a superior alternative; but it is also credited with providing hedonic benefit of enjoyment (Fiore, Jin, and Kim, 2005; Koufaris, 2001). Some examples of website interactivity features which can cater to the needs of a hedonic online consumer can be real time image manipulation, product zoom in/out, 3D virtual tours, electronic dressing rooms, product customization virtual models etc. On the other hand, interactive features such as product search and review options, clear site navigation and layout, product comparison, user ratings and reviews etc. can cater to the needs of a utilitarian online consumer. The above list of interactive features is not an exhaustive one but is relevant to marketing IS design context and based on

literature in areas of marketing, Information systems and human computer usability (Fiore et al., 2005; Haubl and Trifts, 2000; Kim and Kim, 2004).

Consumers can shop for either hedonic or utilitarian motivations, and online shopping can also offer both hedonic and utilitarian environments (Babin et al., 1994; Childers et al., 2001; Hoffman and Novak, 1996; Huang, 2005; Jarvenpaa and Todd, 1997). Consumers with hedonic shopping motivations (HSM) engage in browsing or non-purposive exploration of products, enjoy the shopping experience for its own sake, and consider shopping as leisure. They enjoy the stimulation offered by product novelty and the process of exploring new and interesting shops and environments (Babin et al., 1994; Gehrt and Carter, 1992; Lee et al., 2006). Rich, interactive websites can provide hedonic aspects of pleasure or enjoyment (Fiore and Jin, 2003; Li, Daugherty, and Biocca, 2001).

In contrast, consumers with utilitarian shopping motivation (USM) try to minimize time and effort when shopping and seek convenience (Bellenger and Korgaonkar, 1980). The utilitarian consumer thoughtfully considers and evaluates product-related information prior to purchase (Babin et al., 1994). The interactive nature of a website can offer not only the hedonic dimensions, but also seen as offering utilitarian aspects of convenience and rich information, saving time and/or effort and increasing likelihood of finding a preferable alternative. PU and PEOU reflect the utilitarian aspects of online shopping and PE reflects the hedonic aspects of online shopping (Childers et al., 2001; Lee et al., 2006; Monsuwé, Dellaert, and Ruyter, 2004; Teo et al., 1999). While some consumers may be shopping primarily for instrumental purposes, others may be primarily enjoying these interactive media, and thus both factors can ultimately affect their attitude toward using interactive forms of online shopping. In terms of the research objective for this study, the goal was to determine the relationship between online consumers' shopping motivation and attitude towards online shopping.

Consumers with certain predispositions about their original shopping motivations (either utilitarian or hedonic) are expected to be influenced by the interactive nature of the websites. If online retail environments are more functional or utilitarian in nature, then consumers with USM are assumed to be influenced by such environments to obtain a stronger and positive attitude towards online shopping in that environment. These same consumers are less perceived to realize or search for enjoyment from the usage of interactive websites for online shopping. On the other hand, if the online retail environment provides more entertaining and enjoyable features to engross consumers and keep them pleased then consumers with HSM are assumed to be influenced by such attractive environments to attain a stronger and positive attitude towards online shopping in that environment. These consumers are also less perceived to search for and value the more instrumental or usefulness nature of websites to cater to their online shopping attitude.

Theoretically the two motivations are distinct and diverse; the level of expectations from an online retail website for consumers with either of the motivations (utilitarian and hedonic) may also be distinct and diverse. This means that the shopping motivation level of consumers is perceived to dictate and influence the online shopping behaviour and purchase intentions; effectively playing a moderating role. In other words, consumers with higher levels of HSM will value perceived enjoyment of the website more in generating a stronger attitude towards online shopping from that website; and consumers with higher levels of USM will value the perceived usefulness of the website more in generating a stronger attitude towards online shopping from that website. Summarizing the thoughts together, we would like to propose that:

Consumers with higher levels of hedonic shopping motivation will have:

H1a: A stronger relationship between perceived enjoyment and attitude towards online shopping.
H1b: A weaker relationship between perceived usefulness and attitude towards online shopping

And, consumers with a higher level of utilitarian shopping motivation will have:

H2a: A stronger relationship between perceived usefulness (of the website) and attitude towards online shopping
H2b: A weaker relationship between perceived enjoyment (of the website) and attitude towards online shopping

As mentioned earlier, PU and PEOU reflect the utilitarian aspects of online shopping, but again, PEOU has also shown to reflect intrinsic characteristics based on other studies (Gefen and Straub, 1997; Van der H. Heijden, 2004; Teo, 2001). Depending on the context and type of technology involved, PEOU can also replicate hedonic aspects of online shopping. But online consumers are mostly experienced in the usage of the Internet as well as various web technologies and may have already purchased online on prior occasions. Hence the easiness to use or "ease of use" of a website may not be that important of an impact factor in the online shopping context in comparison with PU or PE. So this study assumes that PEOU, irrespective of the shopping motivations of the online consumer will have no impact on attitude towards shopping online. In other words the shopping

motivation of online consumers is not hypothesized to have any moderating impact on the relationship between PEOU and attitude towards online shopping. Hence we propose that:

H3: Shopping motivation (both utilitarian and hedonic) will not moderate the relationship between perceived ease of use and attitude towards online shopping.

The results of various TAM studies demonstrate that PU has been the primary and "strongest" determinant of behavioural intention to use a technology, with PEOU and PE acting as secondary and "comparatively weaker" determinants (Adams, Nelson, and Todd, 1992; Davis et al., 1992; Van der H. Heijden, 2004; Igbaria, Schiffman, and Wieckowski, 1994; Taylor and Todd, 1995; Venkatesh and Davis, 2000). In contrast to the prior work contexts utilizing the TAM framework, the online shopping context can provide an opportunity to examine these issues in an interactive online environment, which can be designed to cater to both utilitarian and hedonic types of shoppers. Thus, PE is expected to play a stronger role to help generate a positive attitude towards online shopping in an interactive web environment than the traditionally proven stronger role of PU.

Consumers not only can experience the enjoyment and playfulness aspects of the online website, but also can be motivated to achieve a probable purchase or a purchase intention through the various levels of instrumental and utilitarian facilities provided by the website, and hence generating a much stronger purchase intention and experience. For most online retail websites with standard utilitarian interface and interactive controls, adding some sort of stimulation, entertainment and enjoyment features in the online shopping task (through various interactive elements and controls) could produce a more positive and enjoyable experience towards the shopping process itself for consumers with either of the shopping motivations.

In addition with so many competing websites offering similar items or products, consumers can choose to purchase from websites that gives them more value. This value can be in terms of better price which can be offered by many websites; or a better shopping experience through various interactive tools and technologies which may not be offered by most websites. A typical consumer will keep on returning to a website where there is more instrumental and experiential value from shopping. If the shopping process is valued as more enjoyable apart from being useful then there will be a stronger attitude and intention to shop from that online store. In short, in today's dynamic and digital environment, the PE of the website will have a much stronger impact to generate positive attitude towards online shopping in comparison with the PU nature of the website. Based on the above discussion we propose:

H4. On average, perceived enjoyment will be a stronger predictor of attitude towards online shopping than perceived usefulness for all consumers.

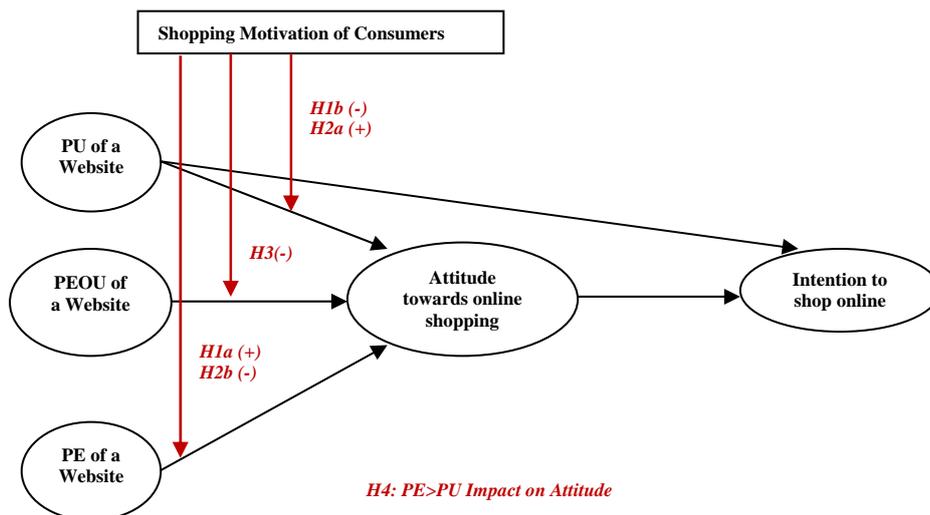The following figure illustrates the model and the hypotheses.

Figure 1 – Proposed model and hypotheses

RESEARCH DESIGN

To investigate online consumers' browsing patterns and purchase intentions in websites with variable levels of interactivity necessitates an experimental type design. We tested our hypothesis using a combination of an email survey; a laboratory based online shopping simulation followed by a computer based survey instrument. A pre-

experiment survey was conducted (two weeks before the laboratory simulation experiment) among the potential samples to ascertain their shopping dimensions. During the simulation session, samples were allocated specific website conditions and were instructed to carry out an online shopping process (up to check out process). Upon completion a post-experiment survey was conducted to assess their perceptions and intentions towards the websites features. The constructs and scales used in our proposed framework are based on existing research.

Samples, products and websites
The sample consists primarily of students from a major Australian university. The student samples were appropriate as they are comfortable with internet technology, 80% of them have made purchases online and a typical consumer segment for Internet shopping (Lim and Dubinsky, 2004). The sample of students was selected based on a voluntary intention to participate in the research after an intensive on-campus advertising campaign. Participants include both undergraduate and graduate students. More than 325 students initially showed interest in the study and a total of 274 participants (84%) completed all three parts of the study.

This study focused on the specific product category of apparel, a product frequently purchased through the Internet (Seckler, 2001). Apparel is the preferred product category for this research because it tends to be a category with which many consumers are highly involved (Kapferer and Laurent, 1985; Keith and Belk, 1978). Due to its symbolic and hedonic characteristics, apparel often tends to elicit ego involvement in its selection and use (Kapferer and Laurent, 1985; Yoh, Damhorst, Sapp, and Lazniak, 2003). Whereas some online apparel shoppers can use various virtual product experiences primarily for functional purposes, such as improved visual examination of the product, others may use such virtual experiences for hedonic purposes to enhance their shopping enjoyment by viewing or inspecting the product from a number of angles or on a virtual model (Childers et al., 2001). Since this study is interested in measuring online consumer shopping motivations on attitude towards online shopping, having a product category such as apparel which can be used to elicit utilitarian or hedonic motivations of consumers through online virtual product experience becomes a preferable option. The constructs of HSM and USM were measured using context related established scales from earlier studies (Lee et al. 2006; Babin et al. 1994). The HSM construct was measured using 11 scale items and USM construct was measured using 4 scale items from the above mentioned studies.

Three retail websites was utilized for this study. Walmart (USA), JCPenney (USA) and Marks and Spencer (UK) was selected as they offered a wide range of apparel products at affordable prices, well established retailers with complete e-commerce functionality and they were based outside of Australia to reduce impact of existing brand loyalty. These three sites were also some of most often visited retail websites in their respective markets (Hitwise, 2008; MarketingCharts, 2009).

The email survey was conducted within 2 weeks before the scheduled lab experiment where student's initial shopping motivation predisposition was measured using existing scales. The lab experiment focused on ensuring that the participants carry out an online shopping simulation for apparel products based on a given limit of virtual money. During the shopping process they were instructed to utilize the websites features and interactive controls in order to help them select and make decisions about the apparel products. The experiment was time controlled and the participants stopped their simulation just before the actual checkout. Participants then completed an online survey immediately after completion of their shopping simulation. The participants where almost equally distributed across the three websites and a total of 274 samples completed the three tasks successfully. Participants where entered into a lottery draw for 30 attractive incentives. All scales and measures used are based on existing relevant studies and significant pre-testing of all the steps and data collection process was conducted. This data collection is based on the first author's doctoral thesis.

DATA ANALYSIS AND FINDINGS

Hierarchical multiple regression was used to test the various hypotheses dealing with shopping motivation and its impact on attitude towards online shopping through the main predictor variables. Since this was part of a broader study, various other forms of multivariate analysis were conducted on the whole data set. None of the multivariate statistical assumptions were violated for data analysis considerations. Overall acceptable cronbach's alphas for the major constructs were obtained for this study which indicates that the items adequately captured the key constructs. Based on the hypotheses, the study focused on analysing the effects of the control variables (age, gender, interactive nature of the website etc.), the main predictor variables of perceived enjoyment, perceived usefulness, perceived ease of use, and shopping motivation (either HSM or USM); as well as the impact of the interaction constructs on attitude towards online shopping. Factor scores were used to measure and differentiate the nature of HSM or USM constructs (where a value greater than zero would exhibit that nature of a particular shopping motivation) for a participant. Based on the 270 sample distribution, the study identified 141 samples with HSM and 132 samples with USM.

Hypothesis 1 stated that consumers with higher levels of hedonic shopping motivations (HSM) will demonstrate (a) a stronger relationship between perceived enjoyment of the website and attitude towards online shopping; and (b) a weaker relationship between perceived usefulness of the website and attitude towards online shopping. Examining the regression analysis results with HSM as the moderator (Table 1), it was found that the control variables only had a small (only 7%) impact on predicting attitude. The main predictor variables (PE, PU, PEOU and shopping motivation) explained an additional 72% of the variance in attitude towards online shopping. Once the interaction constructs were entered into the regression model, the results show an additional 2% increase in the prediction of attitude towards online shopping above and beyond what is already explained by the control and predictor variables. The results show that the interaction between hedonic shopping motivation and PE is positive and highly significant ($\beta = .19$; $p < .001$) thus supporting hypothesis 1a. What this implies is that the more hedonic consumers are in their shopping motivation the stronger is the relationship between PE and attitude towards online shopping. The results also show that the interaction between hedonic shopping motivation and PU is negative and significant ($\beta = -.09$; $p < .05$) thus supporting hypothesis 1b. It means that the more hedonic consumers are in their shopping motivation the weaker is the relationship between PU and attitude towards online shopping.

Hypothesis 2 stated that consumers with higher levels of utilitarian shopping motivations (USM) will demonstrate (a) a stronger relationship between PU of the website and attitude towards online shopping and (b) a weaker relationship between PE of the website and attitude towards online shopping. Examining the regression analysis results with USM as the moderator in Table 2, it was found that, similar to the impact for consumers with HSM, the control variables under USM had the same impact (7%) on predicting attitude. The main predictor variables (PE, PU, PEOU and shopping motivation) explained an additional 72% of the variance in attitude towards online shopping, similar to the findings for HSM. Once the interaction constructs were entered into the regression model, the results showed an additional 1% increase in the prediction of attitude towards online shopping above and beyond what was already explained by the control and predictor variables. The results showed that the interaction between utilitarian shopping motivation and PU was positive and significant ($\beta = .10$; $p < .01$) thus supporting hypothesis 2a. The results also showed that the interaction between utilitarian shopping motivation and PE was negative and significant ($\beta = -.09$; $p < .01$) thus supporting hypothesis 2b. These results support the notion that utilitarian shopping motivation positively moderates the relationship between PU and attitude toward online shopping and negatively moderates the relationship between PE and attitude toward online shopping.

Table 1: Regression analysis of the impact of HSM on attitude towards online shopping

Variables	Model 1	Model 2	Model 3
Control Variables			
Age	-.09	.00	.00
Gender	.01	-.01	-.01
Interactive Websites	.21***	-.03	-.02
Predictor Variables			
Perceived Enjoyment		.59***	.58***
Perceived Usefulness		.23***	.22***
Perceived Ease of Use		.19***	.18***
Shopping Motivation		-.01	.03
Interactions			
HSM X Perceived Enjoyment			.19***
HSM X Perceived Usefulness			-.09*
HSM X Perceived Ease of Use			-.07
F	4.87***	121.26***	95.78***
R^2	.07	.79	.80
Adjusted R^2	.05	.78	.79
R^2 Change		.72	.02

Standardized Coefficients are shown. N = 270.   ** p < .05 **p < .01 ***p < .001*

Table 2: Regression analysis of the impact of USM on attitude towards online shopping

Variables	Model 1	Model 2	Model 3
Control Variables			
Age	-.09	.00	-.01
Gender	.02	-.01	-.01
Interactive Websites	.22***	-.02	-.03
Predictor Variables			
Perceived Enjoyment		.57***	.57***
Perceived Usefulness		.26***	.26***
Perceived Ease of Use		.18***	.18***
Shopping Motivation		.02	.02
Interactions			
USM X Perceived Enjoyment			-.09**
USM X Perceived Usefulness			.10**
USM X Perceived Ease of Use			-.02
F	4.96***	124.93***	94.00***
R^2	.07	.79	.80
Adjusted R^2	.06	.79	.79
R^2 Change		.72	.01

Standardized Coefficients are shown. N = 270.   ** p < .05 **p < .01 ***p < .001*

Hypothesis 3 stated that shopping motivation (both hedonic and utilitarian) will not moderate the relationship between PEOU and attitude towards online shopping. Examining the regression analysis results for the complete sample in Tables 1 and 2 show that the interactions between shopping motivation and PEOU is not significant (β = -.07 for HSM; β = -.02 for USM) thus supporting hypothesis 3. The results show that shopping motivation (both utilitarian and hedonic) has no moderating impact on the relationship between PEOU and attitude toward online shopping.

Hypothesis 4 stated that on average PE will be a stronger predictor of attitude towards online shopping than PU for online consumers. Examining the regression analysis results in Tables 1 and 2 show that the main three control variables (PE, PU, PEOU) explain the majority of the variance in attitude. Among the predictors, PE clearly is the leading predictor (in terms of the relative strength of the coefficient beta coefficients) of attitude followed by PU and then PEOU. The construct of shopping motivation by itself has no impact at all on attitude towards online shopping. Extracting and comparing the results of the coefficient beta values of PE and PU it is obvious that for both the shopping motivations; on average PE has the strongest effect (almost double) on attitude than PU. In other words the relative importance of PE in predicting attitude towards online shopping is much stronger than PU for consumers predisposed with either of the shopping motivations. This supports hypothesis 4.

DISCUSSION

Consumers can shop for either hedonic or utilitarian motivations, and online shopping can also offer both hedonic and utilitarian environments. The TAM was utilized in an online shopping context and the relationships between attitude and its major antecedents of PE, PU and PEOU were analysed. Shopping motivation was integrated in the TAM and its moderating effects were analysed on the three major antecedents of attitude.

Venkatesh, Thong and Xu (2012) suggested that utilitarian and hedonic motivations are important drivers of technology use and hedonic motivation has been described as a critical determinant of behavioural intention. The results also illustrates that websites which have features which are more enjoyable (rather than only useful) to use generated a stronger attitude towards online shopping from consumers with HSM and websites which have features which were more useful to use (rather than being just enjoyable) generated a stronger attitude towards online shopping from consumers with USM. Shopping motivation (either hedonic or utilitarian) of the consumers did not have any statistically significant relationship with attitude towards online shopping but it was found to moderate the relationships between PE and PU with attitude towards online shopping. This moderating impact has not been researched in the online shopping context. The interactions were important in evaluating the moderating outcomes of shopping motivation as websites should be designed to cater to consumers shopping motivation so that it can generate a stronger and positive attitude towards online shopping.

The results also showed that consumers with either of the shopping motivations were not influenced by the ease of use of a website, and the assumption is that an average online shopping websites more or less have similar layout and structure and most online users are already accustomed to it through the extensive growth of online shopping over the last decade. Although PEOU was found to have a significant direct relationship with attitude towards online shopping, shopping motivation was not found to have a moderating impact on the relationship.

The main aim of this paper is to share our acquired understanding of motivational factors for online IS applications through the analysis of the core TAM constructs. We argue that the findings compliments current IS evaluation strategy (for example Howard et al., 2010), specially for measuring motivational elements in online IS evaluation. We consequently provide an empirical validation of the importance of motivational and behavioural factors throughout this study. One of the significant outcomes of this research is the relative importance of PE over the traditionally accepted and dominating role of PU. The results show that PE of the website was by far the dominant predictor of attitude towards online shopping across consumers with HSM or USM. The result is not surprising anymore as online environments have moved from being functional websites to being functional and interactive online engagement. Shopping websites are not created anymore for consumers to complete a task, but to engage them, interact with them and influence and motivate them to stay longer and return to the website and also to recommend the website to others. In designing retail online environments, attention needs to be paid to the enjoyment factor and elements in the website as that can help drive a positive and stronger attitude towards that particular website. This positive attitude has shown to positively influence behavioural intentions to purchase (or re-purchase) from the store, intention to return to the online and intention to recommend the online store to others. Attending to consumers behavioural motivations are crucial in developing an online environment.

This finding has implications in particularly for improving marketing IS design reality as we employ the strengths of behavioural expectation to IS solution. IS evaluation method proposed by Hirschheim and Smithson (1988) focuses on people and process perspectives; Hitt and Brynjolfsson, (1996) focused on IS value oriented evaluation that concentrated on business outcomes such as benefits and values; and Cronholm and Goldkuhl (2003) distinguished three types of evaluation strategies: goal-based, goal-free and criteria-based. However, none of these approaches explored the key elements of motivational aspects in design and development of IS application. In terms of measuring IS effectiveness and success in the online context we did review the theoretical implications and propositions from DeLone and McLean (1992, 2003) but their model is not contextually similar to our study objectives. While DeLone and McLeans (1992, 2003) IS success factors is critical to understanding the value and efficacy of IS management actions and IS investments, this study is focused on motivational factors impacting technology acceptance and usage.

This study has highlighted users emotional, engaging and motivational aspects in the online context that have not been addressed previously as one of the key criteria for IS evaluation. As such, our study contributes to the IS evaluation body of knowledge by complimenting motivational and intrinsic behavioural construct refinement through TAM.

REFERENCES

Adams, D. A., Nelson, R. R., and Todd, P. A. 1992, "Perceived Usefulness, Ease of Use, and Usage of Information Technology: A Replication", *MIS Quarterly,* (16: 2), pp.227-247.

Babin, B. J., Darden, W. R., and Griffin, M. 1994, "Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value", *Journal of Consumer Research,* (20:4), pp.644-656.

Bellenger, D. N., and Korgaonkar, P. K. 1980, "Profiling the recreational shopper", *Journal of Retailing,* (56:3), pp.77-92.

Benbasat, I., and Barki, H. 2007, "Quo vadis TAM?", *Journal of the Association for Information Systems,* (*8*:4).

Chen, L. D., and Tan, J. 2004, "Technology Adaptation in E-commerce: Key Determinants of Virtual Stores Acceptance", *European Management Journal,* (22:1), pp.74-86.

Childers, T. L., Carr, C. L., Peck, J., and Carson, S. 2001, "Hedonic and utilitarian motivations for online retail shopping behavior", *Journal of Retailing,* (77:4), pp.511-535.

Cronholm, S., and Goldkuhl, G. 2003, "Strategies for information systems evaluation-six generic types", *Electronic Journal of Information Systems Evaluation, (*6:2), pp.65-74.

Davis, F. D. 1989, "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology", *MIS Quarterly, (13:*3), 318-340.

Davis, F. D., Bagozzi, R. P., and Warshaw, P. R. 1992, "Extrinsic and intrinsic motivation to use computers in the workplace", *Journal of Applied Social Psychology,* (22:14), pp.1111-1132.

DeLone, W., and McLean, E. 1992. "Information systems success: The quest for the dependent variable", *Informaiton Systems Research,* (3:1), pp.60-95.

DeLone, W., and McLean, E. 2003, "The DeLone and McLean Model of Information Systems Success: A ten-year update", *Journal of Management Information Systems,* (19*:*4), pp.9-30.

Fiore, A. M., Jin, H., and Kim, J. 2005, "For Fun and Profit: Hedonic Value from Image Interactivity and Responses Toward an Online Store", *Psychology and Marketing,* (22*:*8), pp.669.

Fiore, A. M., and Jin, H. J. 2003, "Influence of Image Interactivity on Approach Responses towards an Online Retailer", *Internet Research,* (13:1), pp.38-48.

Gefen, D., and Straub, D. W. 1997, "Gender Differences in the Perception and Use of E-Mail: An Extension to the Technology Acceptance Model", *MIS Quarterly,* (21*:*4), pp.389-400.

Gehrt, K. C., and Carter, K. 1992, "An exploratory assessment of catalog shopping orientations", *Journal of Direct Marketing,* (6:1), pp.29-39.

Haubl, G., and Trifts, V. 2000, "Consumer Decision Making in Online Shopping Environments: The Effects of Interactive Decision Aids", *Marketing Science,* (19:1), pp.4.

Heijden, V. d. H. 2004, "User acceptance of hedonic information systems", *MIS Quarterly,* (28:4), 695-704.

Heijden, V. d. H., Verhagen, T., and Creemers, M. 2003, "Understanding Online Purchase Intentions: Contributions From Technology And Trust Perspectives", *European Journal of Information Systems,* (12:1), pp.41-48

Hirschheim, R., and Smithson, S. 1988, "A critical analysis of information systems evaluation", *Information systems assessment: issues and challenges*, pp.17-37.

Hitt, L. M., and Brynjolfsson, E. 1996, "Productivity, business profitability, and consumer surplus: three different measures of information technology value", *MIS Quarterly*, (20:2), 121-142.

Hitwise, E. 2008, "Hitwise UK Online Retail Update" - High Street Retailers Winning Online-Shopping Battle Retrieved July 10, 2012, from
http://www.imrg.org/80257418006E81C9/(httpInfoFiles)/3ED652EF3F4D437D8025749D00494ECA/$file/pr_Hitwise_060808.pdf

Hoffman, D. L., and Novak, T. P. 1996, "Marketing in hypermedia computer-mediated environments: Conceptual foundations", *Journal of Marketing,*(60*:*3), pp.50.

Howard, N. L., Marshall, P., and Swatman, P. A. 2010, *Reconceptualising Motivation in Adoption and Acceptance Research: Back to Basics.* Paper presented at the Proceedings of the 21st Australasian Conference on Information Systems, Brisbane.

Huang, M. H. (2005). Web performance scale, *Information & Management, 42*(6), pp.841-852.

Igbaria, M., Schiffman, S. J., and Wieckowski, T. J. 1994, "The Respective Roles of Perceived Usefulness and Perceived Fun in the Acceptance of Microcomputer Technology", *Behaviour & Information Technology,* (13:6), pp.349-361

Jackson, B., and Sulaksono, S. 1998, "Going soft on Information Systems evaluation", *Australasian Journal of Information Systems,* (5*:*2), pp.41–50

Jarvenpaa, S. L., and Todd, P. A. 1997, "Consumer Reactions to Electronic Shopping on the World Wide Web", *International Journal of Electronic Commerce,* (1:2), 58-88.

Kapferer, J. N., and Laurent, G. 1985, "Consumer's involvement profile: new empirical results", *Advances in Consumer Research, 12*(S 290), pp.295.

Keith, C., and Belk, R. 1978, "The effects of product involvement and task definition on anticipated consumer effort", *Advances in Consumer Research,*(5) pp.313-318.

Kim, E. Y., and Kim, Y. K. 2004, "Predicting online purchase intentions for clothing products", *European Journal of Marketing, 38*(7), pp.883-897

Koufaris, M. 2001, "Consumer Behavior in Web-Based Commerce: An Empirical Study", *International Journal of Electronic Commerce, 6*(2), pp.115-138.

Lee, H. H., Fiore, A., and Kim, J. 2006, "The role of the technology acceptance model in explaining effects of image interactivity technology on consumer responses", *International Journal of Retail & Distribution Management, 34*(8), pp.621-644.

Lee, Y., Kozar, K. A., and Larsen, K. R. T. 2003, "The Technology Acceptance Model: Past, Present, And Future", *Communications of AIS,* (12), pp.752-780.

Li, H., Daugherty, T., and Biocca, F. 2001, "Characteristics of virtual experience in electronic commerce: A protocol analysis", *Journal of Interactive Marketing,* (15:3), pp.13-30.

Lilienthal, M., Messerschmidt, C. M., and Skiera, B. 2010, *The Utility of TAM-Perceptions: Integration of Technology Perceptions into Choice-Based Conjoint Analysis.* Paper presented at the Proceedings of the 21st Australasian Conference on Information Systems, Brisbane.

Lim, H., and Dubinsky, A. J. 2004, "Consumers' perceptions of e-shopping characteristics: an expectancy-value approach", *Journal of Services Marketing,* (18:7), pp.500-513

Malhotra, Y., Galletta, D. F., and Kirsch, L. J. 2008, "How Endogenous Motivations Influence User Intentions: Beyond the Dichotomy of Extrinsic and Intrinsic User Motivations", *Journal of Management Information Systems,* (25:1), pp.267-299.

MarketingCharts. 2009. "Top 10 Retail Sites by Unique Visitors - July 2009 Retrieved July 10, 2012, from http://www.marketingcharts.com/interactive/top-10-retail-sites-by-unique-visitor-july-2009-10481/

Monsuwé, T. P., Dellaert, B. G., and Ruyter, K. d. 2004, "What drives consumers to shop online? A literature review", *International Journal of Service Industry Management, 15*(1), pp.102-121.

Moon, J.-W., and Kim, Y.-G. 2001, "Extending the TAM for a World-Wide-Web context" *Information & Management,* 38(4), pp.217-230.

O'Cass, A., and Fenech, T. 2003, "Web retailing adoption: exploring the nature of internet users Web retailing behaviour", *Journal of Retailing and Consumer Services,* (10:2), pp.81-94.

Seckler, V. 2001, "Online retail gains momentum", *Women's Wear Daily, 12*.

Straub, D. W., and Burton-Jones, A. 2007. "Veni, Vidi, Vici: Breaking the TAM Logjam", *Journal of the Association for Information Systems, 8*(4).

Taylor, S., and Todd, P. A. 1995, "Understanding Information Technology Usage: A Test of Competing Models", *Information Systems Research,* (6:2), pp.144-176.

Teo, T. S. H. 2001, "Demographic and motivation variables associated with Internet usage activities", *Internet Research: Electronic Networking Applications and Policy,* (11:2), pp.125-137.

Teo, T. S. H., Lim, V. K. G., and Lai, R. Y. C. 1999, "Intrinsic and extrinsic motivation in Internet usage", *Omega, (*27: 1), pp.25-37.

Venkatesh, V., and Davis, F. D. 2000, "A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies", *Management Science,* (46: 2), pp.186

Venkatesh, V., Morris, M. G., Davis, G. B., and Davis, F. D. 2003. User "Acceptance Of Information Technology: Toward A Unified View", *MIS Quarterly,* (27: 3), pp.425-478.

Venkatesh, V., Thong, J.Y.L., and Xin, X. 2012, "Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology", *MIS Quarterly* (36:1), pp. 157-178

Wang, Y. S. 2008, "Assessing e-commerce systems success: a respecification and validation of the DeLone and McLean model of IS success", *Information Systems Journal,* (18), pp.529–557.

Yoh, E., Damhorst, M. L., Sapp, S., and Lazniak, R. 2003, "Consumer adoption of the internet: the case of apparel shopping", *Psychology & Marketing,* (20), pp. 1095-1118.

COPYRIGHT